

CLAIMS

1. A process for manufacturing a printed wiring board, which process comprises preparing a laminated film comprising
5 an insulating film and a conductive metal layer provided on at least one surface of the insulating film with a sputtered metal layer in between, selectively etching the conductive metal layer and the sputtered metal layer of the laminated film to produce a wiring pattern, treating the laminated film with
10 a first treatment liquid capable of dissolving nickel of the sputtered metal layer, and treating with a second treatment liquid capable of dissolving chrome of the sputtered metal layer and also capable of eliminating the sputtered metal layer in the insulating film to remove a superficial surface of the
15 insulating film exposed from the wiring pattern together with the residual sputtered metals in the superficial surface.

2. The process according to claim 1, wherein the insulating film is a polyimide film.

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3. The process according to claim 1, wherein the sputtered metal layer comprises nickel and/or chrome.

4. The process according to claim 1, wherein a surface

of the insulating film, which comprises a polyimide film, exposed from the wiring pattern is removed to a depth of 1 to 100 nm with use of the second treatment liquid.

5 5. The process according to claim 1, wherein the sputtered metal layer on the insulating film which is a polyimide film is a base metal layer comprising nickel and chrome, and wherein the conductive metal layer on the sputtered metal layer is a plated copper layer.

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6. The process according to claim 1, wherein the sputtered metal layer includes a base metal layer on the insulating film which is a polyimide film, the base metal layer comprising nickel and chrome, and a sputtered copper layer on
15 the base metal layer, and wherein the conductive metal layer on the sputtered metal layer is a plated copper or copper alloy layer.

7.. The process according to claim 1, wherein the
20 process further comprises plating the wiring pattern.

8. The process according to claim 7, wherein the plating is selective plating of the conductive metal layer that forms the wiring pattern.

9. A printed wiring board comprising an insulating film and a wiring pattern formed on at least one surface of the insulating film, wherein the insulating film in an area exposed from the wiring pattern has a thickness that is smaller by 1 to 100 nm than that of an area under the wiring pattern.

10. The printed wiring board according to claim 9, wherein the insulating film is a polyimide film.

11. The printed wiring board according to claim 9, wherein the wiring pattern is formed directly on the insulating film without any intermediate adhesive layer.

12. The printed wiring board according to claim 9, wherein the wiring pattern comprises a laminate of metal layers including a sputtered metal layer directly on the insulating film that comprises Ni and/or Cr, and a conductive metal layer on the sputtered metal layer that comprises a conductive metal other than Ni and Cr.

13. The printed wiring board according to claim 9, wherein the conductive metal layer that forms the wiring pattern is selectively plated.

14. A circuit device comprising an electronic component mounted on the printed wiring board of claim 9.